

INTRODUCTION TO PETROLEUM MASTER DATA MANAGEMENT (MDM)

“Ensure Data Consistency, Accuracy, and Reliability in Petroleum Operations with Robust Master Data Management.”

Schedule

Venue (InHouse)	Fees
At Your Organization Premises	Ask For The Quotation

► **Available delivery methods:** In-House Training

Introduction

This course introduces professionals to the principles, processes, and tools of Master Data Management (MDM) in the petroleum industry. With data increasingly seen as a critical asset, managing petroleum master data—covering wells, equipment, locations, and operations—is key to enabling digital transformation, reducing operational risk, and supporting decision-making across upstream, midstream, and downstream sectors.

Objectives

By the end of this training, participants will be able to:

- Understand the fundamentals and importance of MDM in petroleum operations
- Identify types of petroleum master data (well, equipment, facility, etc.)
- Implement data governance and data quality frameworks
- Explore petroleum data standards and taxonomies
- Manage master data lifecycles and integration with enterprise systems

Why Attend

This course is vital for data professionals, engineers, and decision-makers in petroleum operations who aim to reduce data redundancy, eliminate inconsistencies, and drive efficiency through centralized and standardized data practices.

Target Audience

- Petroleum Data Managers & Data Stewards
- Geoscientists, Reservoir & Production Engineers
- IT & Data Governance Teams
- Asset & Operations Managers
- ERP & Digital Transformation Leads

Individual Benefits

- Gain a foundational understanding of petroleum MDM practices
- Improve your data quality and management skills
- Learn to bridge the gap between technical and data teams
- Position yourself for roles in data governance and digital enablement

Organizational Benefits

- Reduce errors and inefficiencies due to poor-quality data
- Enable integrated asset management and field operations
- Support compliance with industry standards (PPDM, ISO)
- Accelerate digital transformation and analytics initiatives

Instructional Methodology

- Case studies from real-world oil & gas projects
- Interactive sessions and group discussions
- Practical MDM exercises and role-based simulations
- Live demonstrations of petroleum data tools

Course Outline

DETAILED 5-DAY COURSE OUTLINE (Customizable) Training Hours: 07:30 AM – 03:30 PM Daily Format: 3–4 Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

DAY 1 - INTRODUCTION TO MDM IN PETROLEUM

- Module 1: Overview of Master Data Management & Key Concepts (07:30 – 09:30)
- Module 2: Introduction to Petroleum Data Types & Challenges (09:45 – 11:15)
- Module 3: Business Case for MDM in Upstream, Midstream & Downstream (11:30 – 01:00)
- Module 4: Data Governance Frameworks (02:00 – 03:30)

DAY 2 - PETROLEUM MASTER DATA DOMAINS

- Module 1: Well Master Data (Naming, ID, Classification) (07:30 – 09:30)
- Module 2: Equipment, Asset & Facility Data Structures (09:45 – 11:15)
- Module 3: Reference Data & Technical Standards (PPDM, ISO 15926) (11:30 – 01:00)
- Module 4: Hierarchies & Relationships in Petroleum MDM (02:00 – 03:30)

DAY 3 - MDM PROCESSES & GOVERNANCE

- Module 1: Master Data Lifecycle – Create, Read, Update, Delete (CRUD) (07:30 – 09:30)
- Module 2: Data Quality Dimensions: Accuracy, Consistency, Completeness (09:45 – 11:15)
- Module 3: Data Stewardship Roles & Responsibilities (11:30 – 01:00)
- Module 4: MDM Policies, Controls & Compliance (02:00 – 03:30)

DAY 4 - TOOLS, INTEGRATION & MIGRATION

- Module 1: Overview of MDM Platforms & Petroleum Data Tools (07:30 – 09:30)
- Module 2: Integrating MDM with ERP, GIS, SCADA & PI Systems (09:45 – 11:15)
- Module 3: Data Cleansing & Master Data Migration (11:30 – 01:00)
- Module 4: Metadata Management & Data Lineage (02:00 – 03:30)

DAY 5 - IMPLEMENTATION & CASE STUDIES

- Module 1: Designing a Petroleum MDM Roadmap (07:30 – 09:30)
- Module 2: Real-world Case Studies: Upstream & Midstream Projects (09:45 – 11:15)
- Module 3: Group Workshop – Data Quality Audit Simulation (11:30 – 01:00)
- Module 4: Final Assessment, Action Plan & Certification (02:00 – 03:30)

Certification

Upon successful participation and completion, attendees will receive a Certificate of Completion in Petroleum Master Data Management (MDM). This course prepares professionals to contribute effectively to enterprise-wide data initiatives in the petroleum sector.

Why Choose MAWA Events

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Interested in running this course for your team?

Please contact us:

TEL:

+601116373203

EMAIL:

info@mawaevents.net

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